

**Amendments to the Claims:**

1. (Currently Amended) A process for purification of an acidic monomer having a double bond, comprising the steps of:

- (a) providing a starting mixture, containing as starting mixture components, respectively based on the starting mixture,
  - (a1) at least about 5 wt.% of the acidic monomer and either
  - (a2) at least about 0.01 wt.% water, or
  - (a3) at least about 0.01 wt.% of at least one starting mixture component comprising impurities which are different to the acidic monomers with the exception of water, or

(a2) and (a3)

wherein the sum of the wt.% proportions of the starting mixture components gives respectively 100 wt.%;
- (b) adding a phase former or a salt of this phase former or a mixture of both to obtain a purification mixture, from which
- (c) at least one first phase and an at least one further phase distinguished from the first phase by means of a phase boundary form a phase system;
- (d) lowering of the temperature of the phase system; wherein
- (e) in one of the phases of the phase system a product crystal containing at least about 50 wt.% of one of the starting mixture components is formed in addition to another starting mixture component as a crystal system;
- (f) isolating the product crystals.

2. (Previously Presented) The process according to claim 1, wherein the temperature is lowered in only one phase of the phase system.

3. (Previously Presented) The process according to claim 2, wherein the temperature is lowered in the most monomer-rich phase of the phase system.

4. (Previously Presented) The process according to claim 1, wherein the acidic monomer has a pH value of less than about 7.

5. (Previously Presented) The process according to claim 1, wherein the acidic monomer is (meth)acrylic acid.

6. (Previously Presented) The process according to claim 1, wherein the phase former is a Brönsted acid with a pH value of less than 6 or a salt of a Brönsted acid or a mixture thereof.

7. (Previously Presented) The process according to claim 6, wherein the Brönsted acid is sulphuric acid or one of its salts or a mixture thereof.

8. (Previously Presented) The process according to claim 1, wherein the phase former is liquid at the time of addition.

9. (Previously Presented) The process according to claim 1, wherein the purification mixture contains the phase former in a quantity in the range from about 1 to about 80 wt.%, based on the purification mixture.

10. (Previously Presented) The process according to claim 1, wherein at least one part of the phase former is recovered after formation of the phase systems and reused in step (b) of the starting mixture.

11. (Previously Presented) The process according to claim 1, wherein the crystal system or the isolated monomer crystal or both are subjected to at least one further purification step.

Claims 12-27 (Cancelled)